Avtex Fibers

Front Royal, Warren County, Virginia
Superfund Program Site Fact Sheet

Type of Facility: Former Rayon Manufacturing Operation

Contaminants: Carbon Disulfides, Phenols, Arsenic, Cadmium, Lead, Sulfides, Polychlorinated Biphenyls (PCBs)

Funding: PRP Lead

Site Description and History

Avtex Fibers is a 440-acre site in Front Royal, Virginia. The former rayon manufacturing plant operated under various owners, including American Viscose from 1940 to 1963, the FMC Corporation from 1963 to 1976, and Avtex Fibers, Incorporated until 1989 when the plant closed and Avtex declared bankruptcy. For short periods, the plant also produced polyester and polypropylene. Operations ceased on November 10, 1989, when the State Water Control Board revoked a water discharge permit.

In 1982, carbon disulfide was identified in groundwater samples from residential wells across the Shenandoah River from the plant. This finding initiated several site investigations that led to interim remedial measures implemented by Avtex in 1983 and 1984 to address the identified contamination. These measures included the purchase of some properties and groundwater pumping and treatment program for contaminant recovery and containment. The site was listed on the National Priorities List (NPL) in June 1986.

The plant held a National Pollutant Discharge Elimination System (NPDES) permit to discharge its effluent into the Shenandoah River. From 1987 to 1988, many NPDES permit violations occurred. In 1989, PCB contamination in the Shenandoah River was linked to Avtex and the plant's NPDES permit was revoked. Following this action, the Avtex Fibers plant shut down.

On February 1990, EPA issued a Unilateral Administrative Order to FMC, including requirements to operate the Wastewater Treatment Plant (WWTP) to protect the Shenandoah River. In the fall of 1997 EPA initiated a Time-Critical Removal Action (TCRA) to remove approximately 20 acres of buildings which were rapidly deteriorating and causing potential health and environmental problems. EPA completed the demolition of the buildings in the fall of 1998. FMC agreed to take over remediation of the site at that point. A Consent Decree was signed and became effective in October 1999, which made this a PRP-lead site.

Site ownership was transferred to the Economic Development Authority of Front Royal and Warren County (EDA) in the spring of 2000.

Threats and Contaminants

The groundwater is contaminated with carbon disulfide, phenol, sodium, and heavy metals, including lead, arsenic, and cadmium from waste deposited in the viscose disposal basins. The soil is contaminated with carbon disulfide, phenol, arsenic, lead, and PCBs. The Shenandoah River contains PCBs from the plant. Direct contact and/or ingestion of contaminated water or soil and dust inhalation from the site may threaten

public health.

Current Site Status

Work currently being performed on all remediation activities involving the site is being implemented by the PRP, with EPA and VDEQ oversight. Those activities include:

TCRA Buildings: The PRP sorted, processed, and disposed of the demolition material generated from the 20-acre building demolition operation. Some piles of fine fraction materials remained on site and were stabilized for on-site disposal. This work was completed in September 2006.

NTCRA Buildings: In December 2001, EPA selected a Non-Time Critical Removal Action (NTCRA) to decontaminate the remaining buildings, and remove the remaining sewers. FMC began the decontamination in January 2002. As FMC works on cleanup, the U. S. Army Corp of Engineers is also onsite as a separate, non-superfund project, conducting asbestos abatement, other cleanup activities, and the demolition of the remaining building. The sewer and subgrade structure cleanup began in June 2005. The last building, the Power Plant, is scheduled to be demolished by implosion in September 2005.

NTCRA Basins Closure: Work started in May 2001 to close the five Sulfate Basins, the WWTP (two polishing ponds and an emergency lagoon), the five Fly Ash Basins, and the Fly Ash stockpile. A landscaping plan to return the area to a natural state was developed called the Conservancy Park Master Plan. The ponds will continue to be monitored while the work is carried out.

OU-7 (ROD-5) Viscose Basins 9-11, groundwater and surface water: This unit is in the remedial inspection/feasibility study stage. There is a plume of contamination in the ground water and a feasibility study is underway to evaluate a variety of cleanup alternatives. This will be the last ROD for the site. A leachate oxidation and treatability study was carried out in 2006.

OU-10 (ROD-4) Viscose Basins 1-8, the new landfill, plant area soils: This unit is in the remedial design phase of work. The ROD which defined the course of action for remediation was signed in March 2004. The basins and landfill will be capped, leachate treated and ground water monitored. Also, contaminated plant area soils will be excavated and disposed of as appropriate. The RD for this work was completed in September 2006.

OU-8 (ROD-3) Areas B and C: In August of 2000, the areas B and C in the front of the site were taken to the public for review and comment. The ROD which was signed in September 2000 identified institutional controls with deed restrictions as the remedy. The requirements of the ROD are being implemented through a December 1999 Conservation Easement. These areas are within EDA's planned Royal Phoenix business park redevelopment.

SoccerPlex: FMC, EPA, DEQ, the U. S. Soccer Foundation, and the EDA worked together to build soccer fields on a 30-acre parcel of land in the southeast corner of the site. The SoccerPlex opened in September 2006.

Community Relations and Concerns

Prior to the signing of the Consent Decree 1999, EPA conducted traditional community relations. Several public workshops were held for the community and local officials after the site was listed on the NPL. Meetings were held to discuss field investigations and to discuss proposed response actions plans. With the plant shutdown, community relations activities increased. EPA opened a public information center. Fact sheets were sent out

and site tours were been provided periodically as a means of updating the public on site progress. An EPA Technical Assistance Grant was awarded to a local group, the Friends of the Shenandoah River. A technical advisor was selected by the group to help them interpret site data. The grant ended in 1994.

In February 1999, EPA, VDEQ, FMC and the EDA began sponsoring a multi-stakeholders group (MSG) to facilitate public participation and input into the cleanup and redevelopment of Avtex. The MSG provided an interactive forum where a broad group of interested parties were updated on site activities and can consider site-related issues critical to the future of the area. MSG members included local officials, community members, environmental and business group representatives, and municipal planners. The last stakeholder group meeting was held in October 2001. In addition to the regular MSG meetings, EPA and FMC's contractors performed a door-to-door outreach to nearly 300 homes in June 2001. Another group, the Avtex Redevelopment Advisory Committee, formed to promote redevelopment of the site and disbanded in March 2005. Through these community relations efforts, various parties were provided an opportunity to raise issues and concerns relative to the site.

Other public interest events have been held at the site. Open houses that provide informational displays on cleanup progress and future plans and site tours to interested parties were conducted in July 2001 and October 2002. In April 2002, local elementary school children helped plant trees on a closed basin, and in May 2005 another open house was held. In September 2005 a media event to launch the Royal Phoenix site redevelopment is planned in conjunction with the Power Plant implosion.

In addition to potential health and environmental risks, local resident concerns have included odors coming from the site and their health impacts, concern that residential soils had not been tested, concern that sulfate waste located in the 100-year flood plain and adjacent to the River was being closed on-site, and concern that information in the administrative record was difficult to locate. Local officials and business group

representatives have expressed concern with the length of time it takes to clean up a site and the desire to delist parcels of land from the Avtex Superfund site.

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